

Path of urinary system 1-4

Path 1. Glomerulonephritis

- **Chronic glomerular nephritis** can **cause**: chronic renal failure.
- **Glomerular diseases** :
 - primary : affect kidney only
 - Secondary: affect kidney and other organs.
- **Other name** of **minimal change disease** is: lipoid nephrosis.
- **Glomerular disease caused by SLE** also **called**: lupus glomerular disease.
- Most **primary glomerular disease** **due to**: immunologic mechanism.
- The **cause** of **minimal change glomerular disease** is: chemical change in basement membrane.
- In **minimal glomerular disease** we can find out: podocyte fusion in **electron microscope**.
- **Complication** of **minimal glomerular disease** is: nephrotic syndrome.
- **Post streptococcal glomerular**: immune complex of: group a beta hemolytic streptococci and IgG ab
- **Grossly petechial hemorrhage** can **found in**: **post strept glomerular**.
- **Tabular change** in **post strept disease** ; hyaline cast
- **Immunofluorescence** in **post strept** can **detect**: IgG and C3.
- **Site of despoliation** of **immune complex** in **post strept glomerular**: sub-epithelial.
- **Clinical presentation** of **post strept glomerular**: nephritic syndrome.
- **Nephritic** syndrome:

1. Hematuria.2. Oliguria.3. Peri-orbital oedema.4. Hypertension.

- **Nephrotic** syndrome:

1. Hypoproteinemia. 2. Proteinuria.3. Edema.4. Hypercholesterolemia.

- **Most common cause** of **nephrotic syndrome**:
 - in **children**: minimal glomerular disease,
 - in **adult**: membranous glomerular disease

Path 2. Cystitis pyelonephritis

- **Cystitis** is: inflammation of urinary bladder.
- 3 causes of **cystitis**: bladder calculi, instrumentation, immune deficiency.
- Women are more likely developed **cystitis due to**: short urethra.
- Most causative agent of **cystitis** is: E.coli.
- **Tuberculous cystitis** is due to: renal tuberculosis.
- Most causative agents of **cystitis** in immunosuppressed patients are: candida Albican (monilia) and cryptococcal agents.
- Clinical presentation of **cystitis** are: frequency, dysuria, lower abdominal pain + systemic signs: fever and malaise.
Primary diseases can lead to **cystitis**: BPH, bladder calculi or tumor.
- Other name of **interstitial cystitis** is: **Hunner Ulcer**
- Causes of **hemorrhagic cystitis** are: radiation or chemotherapy or adenovirus
*characteristics: ulceration and hemorrhage
- Cause of **Suppurative cystitis** is: pyogenic bacterial infection
*characteristic: suppurative exudate.
- Cause of **Follicular cystitis**: unknown
*characteristic: aggregate of lymphocytes.
- Cause of **Eosinophilic cystitis**: subacute inflammation due to allergic condition
*characteristic: sub mucosa eosinophilic and giant cell and fibrosis.
- Cause of **Interstitial cystitis**: autoimmune
*characteristic: painful persistent chronic inflammation and fibrosis all layers of bladder.
- Clinical presentations of **interstitial cystitis** are: supra pubic pain, frequency, dysuria, hematuria, bacterial infection, mucosal ulcers (hunner ulcers).
- Microscopic picture of **interstitial cystitis**: inflammatory cells, granulation, mast cells.
- Cause of **Polypoid cystitis** irritation of bladder by catheter
*characteristics: Polypoid projections due to sub mucosal edema.
- **Pyelonephritis**: inflammation of renal pelvis and renal interstitium.
- 3 causes of **pyelonephritis**: congenital vesicoureteral reflux, DM, immunosuppression.
- Most causative agent of **pyelonephritis** is: E.coli.
- Routes of **pyelonephritis**: ascending, Haematogenous (rare).

Path 3.Renal tumors-2

- Most common **benign tumor in renal system** is: renal cortical adenoma.
- Most common **malignant tumor** is: renal cell carcinoma.
- Most common **renal tumor in children**: Wilms tumor.
- **Clinical associated disease** can lead to **renal cortical adenoma**: hemodialysis, chronic pyelonephritis.
- **C/S color** of **cortical renal adenoma** is: yellow to gray.
- **Characteristic** of **renal oncocytoma** is: central scar, mahogany brown C/S
- **Microscopic characters** of :
 - 1- **renal cortical adenoma** is: papillomatous structure and small cuboidal cells.
 - 2- **Renal oncocytoma**: large eosinophilic with edematous fibrous stroma.
- **3 causes** of **renal cell carcinoma**: smoking, obesity, hypertension.
- **Clinical presentation** of **RCC**: flank pain, flank lump, hematuria.
- Most **reliable presentation** of **RCC** is: hematuria.
- **3 examples** of **paraneoplastic syndrome** of **RCC**: polycythemia, hypercalcemia, hypertension.
- Most **common sites** of **metastasis** is lung followed by bones.
- **Most common RCC** is: **clear cell carcinoma**.
- **2 characteristics** of **clear cell (RCC)**:
 - 1- lobulated golden yellow C/S
 - 2- cyst formation
- **Histo pathology** of **clear cell (RCC)**: nests of clear cells with delicate vascular network.

Path 4. Renal tumors-2

- **Papillary RCC** is better outcome than **clear renal carcinoma**.
- **Papillary RCC** is usually bilateral or multiple.
- **Characteristics** of **papillary RCC**: papillae structure, foamy histiocytes, Psammoma bodies.
- **Characteristics** of **Chromophobe RCC**: solitary, spherical, tan light brown cs.
- **Most critical histo pathology** of **Chromophobe RCC**: is: prominent cell membrane.
- The **worst prognosis** of **RCC** is: **collecting duct carcinoma**.
- **Clinical presentation** of **collecting duct carcinoma**; flank pain, hematuria, metastasis.
- **Grossly characteristics** of **collecting ducts RCC**: medullary location, gray white C\S, invasive borders.
- **Histo path characteristics** of **collecting duct RCC**: tubulopapillary surrounded by inflamed desmoplastic stroma, cells atypia.
- **Other name** of **Wilms tumor** is: **nephroblastoma**.
- **Clinical presentation** of **Wilms tumor**: abdominal mass and tenderness, hematuria,
- **Treatment**: surgical remove or chemotherapy.
- **Grossly characteristic** of **Wilms tumor**: single mass, lobulated appearance, pale gray to tan pink cs.
- **Histo path characteristic** of **Wilms tumor**: **3 cells**
 - blastema cells (primitive cells)
 - stromal cells
 - epithelial cells.